

ID Q41238\_SOLTU PRELIMINARY; PRT; 857 AA.  
AC Q41238;  
DT 01-NOV-1996 (TrEMBLrel. 01, Created)  
DT 01-NOV-1996 (TrEMBLrel. 01, Last sequence update)  
DT 01-OCT-2003 (TrEMBLrel. 25, Last annotation update)  
DE Linoleate:oxygen oxidoreductase (Fragment).  
OS Solanum tuberosum (Potato).  
OC Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;  
OC Spermatophyta; Magnoliophyta; eudicots; core eudicots; asterids;  
OC lamiids; Solanales; Solanaceae; Solanum.  
OX NCBI\_TaxID=4113;  
RN [1]  
RP NUCLEOTIDE SEQUENCE.  
RX MEDLINE=94302170; PubMed=8029354; DOI=10.1104/pp.105.1.269;  
RA Geerts A., Feltkamp D., Rosahl S.;  
RT "Expression of lipoxygenase in wounded tubers of Solanum tuberosum  
RT L.";  
RL Plant Physiol. 105:269-277 (1994).  
CC -!-- FUNCTION: Plant lipoxygenase may be involved in a number of  
CC diverse aspects of plant physiology including growth and  
CC development, pest resistance, and senescence or responses to  
CC wounding (By similarity).  
CC -!-- CATALYTIC ACTIVITY: Linoleate + O(2) = (9Z,11E)-(13S)-13-  
CC hydroperoxyoctadeca-9,11-dienoate.  
CC -!-- COFACTOR: Iron (By similarity).  
CC -!-- SIMILARITY: Belongs to the lipoxygenase family.  
CC -!-- SIMILARITY: Contains 1 PLAT domain.  
DR EMBL; S73865; AAB31252.1; -.  
DR HSSP; P08170; 1FGT.  
DR GO; GO:0005506; F:iron ion binding; IEA.  
DR GO; GO:0016165; F:lipoxygenase activity; IEA.  
DR GO; GO:0016491; F:oxidoreductase activity; IEA.  
DR GO; GO:0006118; P:electron transport; IEA.  
DR InterPro; IPR000907; Lipoxygenase.  
DR InterPro; IPR001024; Lipoxygenase\_LH2.  
DR InterPro; IPR001246; Plant\_lipoxygenase.  
DR InterPro; IPR008976; PLAT\_LH2.  
DR Pfam; PF00305; Lipoxygenase; 1.  
DR Pfam; PF01477; PLAT; 1.  
DR PRINTS; PR00087; LIPOXYGENASE.  
DR PRINTS; PR00468; PLTLPOXGNASE.  
DR SMART; SM00308; LH2; 1.  
DR PROSITE; PS00711; LIPOXYGENASE\_1; 1.  
DR PROSITE; PS00081; LIPOXYGENASE\_2; 1.  
DR PROSITE; PS50095; PLAT; 1.  
KW Dioxygenase; Iron; Oxidoreductase.  
FT NON TER 857 857  
SQ SEQUENCE 857 AA; 96585 MW; 3785A24E8DBA8DA7 CRC64;  
I QIVGLLIGGH HDSKKVKGT VMMKKNALDF TDLAGSLTDK IFEALGQKVS FQLISSVQSD  
6 PANGLQGKHS NPAYLENFLF TLTPLAAGET AFGVTFDWNE EFGVPGAFII KNTHINEFFL  
1 KSLTLEDVPN HGKVHFVCNS WVYPSFRYKS DRIFANQPY LPSETPELLR KYRENELLTL  
1 RGDGTGKREA WDRIYDYDVY NDLGNPQDQE QNVRTTLGGS ADYPYPRRGR TGRPPTRTDP  
2 KSESRIPLIL SLDIYVPRDE RFGHLKMSDF LTYALKSIVQ FILPELHALF DGTPNEFDSF  
2 EDVLRLYEGG IKLPQGPLFK ALTAAPLEM MKELLRTDGE GILRFPTPLV IKDSKTAWRT  
2 DEEFAREMLA GVNPPIISRL QEFPPSKSKLD PEAYGNQNST ITAEHIEDKL DGLTVDEAMN  
2 NNKLFILNNH DVLIPYLRR I NTNTTKTYAS RTLLFLQDNG SLKPLAIELS LPHPDGDQFG  
2 VISKVYTPSD QGVESSIWL AKAYVAVNDS GHQQLISHWL NTHAVIEPFV IATNRQLSVL  
2 HPIHKLLYPH FRDTMNMNAM ARQILINAGG VLEST<sup>17</sup>PSK FAMEMSAVVY KDWVFPDQAL  
2 PADLVKRGVA VEDSSSPHG V RLLIEDPYA VDGLEIWSAI KSWVTDYCSF YYGSDEEILK  
2 DNELOQAWWKE LREVGHGDKK NEPWPPMET PQELIDSCTT IIWIASALHA AVNFGQYPYA  
2 11

TV

TF